CLAIMS

1. A process for producing a polyester sheet by dropping a molten polyester sheet extruded from an orifice-form nozzle on a cooling roll having the grooves of a large number of micro-cracks formed on the surface, closely adhering it to the cooling roll and solidifying it on the cooling roll, wherein

the surface temperature (T, °C) of the molten polyester sheet 10 mm below the orifice-form nozzle is maintained at a temperature which satisfies the following expression (1):

$$(Tc+20)°C \leqq T \leqq (Tm+40)°C \quad (1)$$

wherein Tc and Tm are the falling temperature crystallization temperature (°C) and melting point (°C) of the polyester, respectively and T is as defined hereinabove, and the surface temperature of the cooling roll when it contacts the molten polyester sheet is controlled to a range of 5 to (Tg-20)°C to continuously form the polyester sheet while preventing the adhesion of a sublimate from the molten polyester to the inside of the groove of each micro-crack of the cooling roll.

2. The process of claim 1, wherein the cooling roll shows a ventilation resistance measured by a vacuum leakage method of 10,000 sec or less based on the grooves of the large number of micro-cracks formed on the surface of the cooling roll.

3. The process of claim 1, wherein the cooling roll has the grooves of at least five micro-cracks intersecting a 10 mm virtual straight line drawn in any direction on the surface of the cooling roll, 70 % or more of the grooves of the intersecting micro-cracks have a width of 0.1 to 100 µm at intersections with the virtual straight line, and the total width of the grooves of the micro-cracks intersecting the

virtual straight line at all the intersections is 5 mm or less.

4. The process of claim 1, wherein the total opening area of the grooves of the large number of micro-cracks open to the surface of the cooling roll is 0.01 to 0.3 mm^2 per 1 mm^2 of the surface of the cooling roll.

5. The process of claim 1, wherein the cooling roll cools the polyester sheet on the surface by introducing cooling water into the inside thereof and discharging it and a rise in the temperature of cooling water to be discharged from the temperature of cooling water to be introduced is controlled to 1 to 10° C.

6. The process of claim 1, wherein the diameter of the cooling roll is 0.6 to 4.0 m and the thickness of the shell having the grooves of the large number of micro-cracks on the surface of the cooling roll is 5 to 30 mm.

7. The process of claim 1, wherein the molten polyester sheet is closely adhered to the cooling roll through the shift of charge by applying static electricity to the molten polyester sheet.

8. The process of claim 7, wherein the molten polyester sheet is a molten sheet of a polyester comprising terephthalic acid as the main acid component and has a resistivity of 3×10^6 to 1×10^8 $\Omega \cdot cm$ and static electricity is applied to the molten polyester sheet to ensure that the amount of initial accumulated charge should be 2.5 to 8.5 $\mu C/mm^2$.

9. The process of claim 8, wherein the polyester sheet

is produced at a rate of 65 to 250 m/min.

10. The process of claim 7, wherein the molten polyester sheet is a molten sheet of a polyester comprising 2,6-naphthalenedicarboxylic acid as the main acid component and has a resistivity of 1×10^7 to 5×10^8 $\Omega \cdot cm$ and static electricity is applied to the molten polyester sheet to ensure that the amount of initial accumulated charge should be 2.2 x 8.0 $\mu C/mm^2$.

11. The process of claim 10, wherein the polyester sheet is produced at a rate of 40 to 200 m/min.

12. The process of claim 1, wherein the molten polyester sheet is closely adhered to the cooling roll by making the pressure of an atmosphere on the side in contact with the cooling roll of the molten polyester sheet lower than the pressure of an atmosphere on the opposite side.

13. A process for producing a biaxially oriented polyester film, comprising biaxially orienting the polyester sheet obtained by the process of claim 1 in a longitudinal direction and a transverse direction.

14. The process of claim 13, wherein the product of a draw ratio in a longitudinal direction and a draw direction in a transverse direction is 4 to 50 times.